SEQUENCE LISTING

<110>   Burch, Ronald
        Sackler, David

<120>   Contraceptive Antibody Vaccines

<130>   6750-018-999

<140>   09/831,631
<141>   2001-05-10

<160>   70

<170>   PatentIn version 3.0

<210>   1
<211>   16
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description of Artificial Sequence: Primer for PCR

<400>   1
aacagctatg accatg                                                        16

<210>   2
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description of Artificial Sequence: Primer for PCR

<400>   2
gaattcatgg cttgggtgtg                                                    20

<210>   3
<211>   13
<212>   PRT
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description of Artificial Sequence: CDR Derived peptide with Biotin
label at the N-terminal residue

<400>   3
Thr Ala Lys Ala Ser Gln Ser Val Ser Asn Asp Val Ala
1               5                   10

<210>   4
<211>   9
<212>   PRT
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description of Artificial Sequence: CDR Derived peptide with Biotin

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label at the N-terminal residue

<400> 4
Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr
1               5

<210> 5
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: CDR Derived peptide with Biotin
label at the N-terminal residue

<400> 5
Phe Ala Gln Gln Asp Tyr Ser Ser Pro Leu Thr
1               5                   10
<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: CDR Derived peptide with Biotin
label at the N-terminal residue

<400> 6
Phe Thr Asn Tyr Gly Met Asn
1               5

<210> 7
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<223> Description of Artificial Sequence: CDR Derived peptide with Biotin
label at the N-terminal residue

<400> 7
Ala Gly Trp Ile Asn Thr Tyr Thr Gly Glu Pro Thr Tyr Ala Asp
1               5                   10                  15
Asp Phe Lys Gly

<210> 8
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: CDR Derived peptide with Biotin
label at the N-terminal residue

<400> 8
Ala Arg Ala Tyr Tyr Gly Lys Tyr Phe Asp Tyr
1               5                   10

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<210>    9
<211>    221
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Sperm cell specific epitope

<400>    9
gaattccagc cttcaggtga acatggctcc ggtgaacagc cttctggtga gcaggcctcg      60
ggtgaacagc cttcaggtga gcacgcttca ggggaacagg cttcaggtgc accaatttca     120
agcacatcta caggcacaat attaaattgc tacacatgtg cttatatgaa tgatcaagga     180
aaatgtcttc gtggagaggg aacctgcatc actcagaatt c                         221

<210>    10
<211>    69
<212>    PRT
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Sperm cell specific epitope

<400>    10
Gln Pro Ser Gly Glu His Gly Glu Gln Pro Ser Gly Glu Gln Ala Ser
1               5                   10                  15
Gly Glu Gln Pro Ser Gly Glu His Ala Ser Gly Glu Gln Ala Ser Gly
            20                  25                  30
Ala Gln Ile Ser Ser Thr Ser Thr Gly Thr Ile Leu Asn Cys Tyr Thr
        35                  40                  45
Cys Ala Tyr Met Asn Asp Gln Gly Lys Cys Leu Arg Gly Glu Gly Thr
    50                  55                  60
Cys Ile Thr Gln Asn
65

<210>    11
<211>    75
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Cloning primers for SP10

<400>    11
gaattccagc cttcaggtga acatggctcc ggtgaacagc cttctggtga gcaggcctcg      60
ggtgaacagc cttag                                                       75

<210>    12
<211>    75
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Cloning primers for SP10

<400>    12
gtgagcacgc ttcaggggaa cagccttcag gtgcaccaat ttcaagcaca tctacaggca      60
caatattaaa ttgct                                                       75
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<210>  13
<211>  70
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Cloning primers for SP10

<400>  13
acacatgtgc ttatatgaat gatcaaggaa aatgtcttcg tggagaggga acctgcatca      60
ctcagaattc                                                            70

<210>  14
<211>  70
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Cloning primers for SP10

<400>  14
acacagcagc ttatatgaat gatcaaggaa aagcacttcg tggagaggga accgcaatca      60
ctcagaattc                                                            70

<210>  15
<211>  79
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Cloning primers for SP10

<400>  15
gaattctgag tgatgcaggt tccctctcca cgaagacatt ttccttgatc attcatataa      60
gcacatgtgt agcaattta                                                  79

<210>  16
<211>  79
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Cloning primers for SP10

<400>  16
gaattctgag tgattgcggt tccctctcca cgaagtgctt tttgatgatc attcatataa      60
gctgctgtgt agcaattta                                                  79

<210>  17
<211>  75
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Cloning primers for SP10

<400>  17
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atattgtgcc tgtagatgtg cttgaaattg gtgcacctga agcctgttcc cctgaagcgt      60
gctcacctga aggct                                                       75

<210> 18
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Cloning primers for SP10

<400> 18
gttctcccga ggcctgctca ccagaaggct gttcaccgga gccatgttca cctgaaggct      60
ggaattc                                                                67

<210> 19
<211> 210
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Sperm cell specific epitope M
      SA-6

<400> 19
gtcggcagcc tccgaagcag cccgctccag agcccgctgc tccgaccgct cgtccagagc      60
agcctctgct tgctgttcct cttgctgcga tacagctgcg gcgacggcag ctgcagccga     120
cgatactgcg acttgacggt gtgccggcga atgtacttgc tgctgcgatt cacggacccg     180
ccgctcccgc agacgtgctg cgtcttgagc                                      210

<210> 20
<211> 70
<212> PRT
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Sperm cell specific epitope M
      SA-6

<400> 20
Gln Pro Ser Glu Ala Ser Ser Gly Glu Val Ser Gly Asp Glu Ala Gly
1               5                   10                  15
Glu Gln Val Ser Ser Glu Thr Asn Asp Lys Glu Asn Asp Ala Met Ser
            20                  25                  30
Thr Pro Leu Pro Ser Thr Ser Ala Ala Ile Thr Leu Asn Cys His Thr
        35                  40                  45
Cys Ala Tyr Met Asn Asp Asp Ala Lys Cys Leu Arg Gly Glu Gly Val
    50                  55                  60

Cys Thr Thr Gln Asn Ser
65                  70

<210> 21
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature

<223> Description of Artificial Sequence: Oligomer from MSA 63

<400> 21
gtcggcagcc tccgaagcag cccgctccag agcccgctgc tccga            45

<210> 22
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Oligomer from MSA 63

<400> 22
agcccgctgc tccgaccgct cgtccagagc agcctctgct tgctg            45

<210> 23
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Oligomer from MSA 63

<400> 23
agcctctgct tgctgttcct cttgctgcga tacagctgcg gcgac            45

<210> 24
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Oligomer from MSA 63

<400> 24
tacagctgcg gcgacggcag ctgcagccga cgatactgcg acttg            45

<210> 25
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Oligomer from MSA 63

<400> 25
cgatactgcg acttgacggt gtgcacgcga atgtacttgc tgctg            45

<210> 26
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description of Artificial Sequence: Oligomer from MSA 63

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<400>  26
atgtacttgc tgctgcgatt cacggacgcg ccgctcccgc agacg                    45

<210>  27
<211>  45
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Oligomer from MSA 63

<400>  27
cgattcacgg acgcgccgct cccgcagacg tgctgcgtct tgagc                    45

<210>  28
<211>  17
<212>  PRT
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Consensus sequence

<400>  28
Gln Pro Ser Glu Ala Ser Ser Gly Glu Val Ser Gly Asp Glu Ala Gly
1               5                   10                  15
Glu

<210>  29
<211>  384
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Consensus sequence


<400>  29
atggcttggt gttggacctt gctattcctg atggcagctg cccaaagtgc ccaagcagat    60
atgcaaatga cacaaagtcc tagtagtttg agtgctagtg tgggagatca agtgacaatc   120
acatgtcggg ctagtcaaag tatcagtaac tgtttggctt ggtatcaaca aaagcctgga   180
aaggctccta agttgttgat ctatgctgct agtagtttgg agagtggagt gcctagtcgg   240
ttcagtggaa gtggaagtgg aacacggttc accttgacca tgagtagttt gcaacctgag   300
gatttcgcta cctattattg tcaacaatat aacagtttgc cttggacctt cggacaagga   360
accaaggtgg agatcaagga attc                                          384

<210>  30
<211>  417
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description of Artificial Sequence: Consensus sequence


<400>  30
atggcttggg tgtggacctt gctattcctg atggcagctg cccaaagtgc ccaagcacag    60
gttcagctgg tgcagtgtgg cgctgaggtg aagaagcctg gcgcttctgt gaaggtgtct   120
tgcaaggctt ctggctacac attcacatct tacgctatat cttggaattg ggtgaggcag   180
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gctcctggcc agggcctgga gtggatgggc tggataaatg gaaatggaga tacaaattac    240
gcccagaagt tccagggaag ggtgactata actgctgata cttctacttc tactgcttac    300
atggagctgt cttctctgag gtctgaggat actgctgttt actactgcgc tagggctcct    360
ggctacggct ctgattattg gggacaggga acactggtta cagtttcttc tgaattc      417

<210>    31
<211>    63
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Consensus sequence

<400>    31
gacattgtga tgtcacagtc tccatcctcc ctagctgtgt cagttggaga gaaggttact    60
atg                                                                  63

<210>    32
<211>    74
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description of Artificial Sequence: Consensus sequence

<400>    32
gcaagctcat agtaaccttc tctccaactg acacacgata gggaggatgg agactgtgac    60
atcacaatgt ctgc                                                      74

<210>    33
<211>    84
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

<400>    33
agctgcgtcg gcagcctccg aagcagcccg ctccagagcc cgctgctggc atggtaccag    60
cagaaaccag ggcagtctcc taaa                                           84

<210>    34
<211>    72
<212>    DNA
<213>    Artificial Sequence

<220>
<221>    misc_feature
<223>    Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>    34
ctgccctggt ttctgctggt accatcggag cagcgggctc tgcggagcgg gctgcttcgg    60
acggctgccg ac                                                        72

<210>    35
<211>    78
```

<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

<400> 35
gacattgtga tgtcacagtc tccatcctcc ctagctgtgt cagttggaga gaaggttact    60
gtgagcgcta agtccagt    78

<210> 36
<211> 75
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

<400> 36
gagagccttt tatatagtag caatcaaaag atctacttgg cctggtacca gcagaaacca    60
gggcagtctc ctaaa    75

<210> 37
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

<400> 37
ctgctgattt actgggcatc cactagggaa tctggggtcc ctgatcgctt cacaggctgg    60
atctggg    67

<210> 38
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

<400> 38
gcacagcaat attatagata tctcggacgt tcggtggagc caccaagctg caaatcaaac    60
cggaattc    68

<210> 39
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature

<223> Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400> 39
accgcctgtg aagcgatcag gcaccccaga ttccctagtg gatgcccagt aaatcagcag          60
tttaggaga                                                                  69

<210>  40
<211>  77
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  40
ctgccctggt ttctgctggt accaggccaa gtagatcttt tgagattgct actatataaa          60
aggctctgac tggactt                                                         77

<210>  41
<211>  78
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  41
agcgctcata gtaaccttct ctccaactga cacagctagc gacgatcgag actgtgacat          60
cacaatgtct gcttgggc                                                        78

<210>  42
<211>  78
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  42
gaattcccgt ttgatttcca gcttggtgcc tccaccgaac gtccgaggat atctataata          60
ttgctgtgcg taataaac                                                        78

<210>  43
<211>  57
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1

```
<400>  43
agagatttga gtctgaccat cagcagtgtg aaggctgaag acgtggcagt ttattac         57

<210>  44
<211>  57
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  44
tgccaggtct tcagccttga cactgctgat ggtgagagtg aaatctgtcc cagatcc         57

<210>  45
<211>  66
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  45
tcgtgccagt tcctcgtcga ctagctcttc gactagctcc tgctgctctt gtcggtcacg      60
gaattc                                                                 66

<210>  46
<211>  75
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Construct for MSA1 and
MSALVAC-1


<400>  46
gaattccgtg accgacaaga gcagcaggag ctagtcgaag agctggtcga cgaggaactg      60
gcacgacggg ttcgt                                                       75

<210>  47
<211>  80
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for LDH-C4

<400>  47
gaattcatgg cttgggtgtg gaccttgcta ttcctgatgg cagctgccca aagtgcccaa      60
gcacagatcc agttggtgca                                                  80

<210>  48
<211>  79
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<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description for Artificial Sequence: Constructs for LDH-C4

<400>   48
gtctggacct gagctgaaga agcctggaga gacagtcaag atctccgcta aggcttctgg      60
gtataccttc acaaactag                                                   79

<210>   49
<211>   80
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>   49
gaatgaactg ggtgaagcag gctccaggaa agggtttaaa gtggatgggc tggataaaca      60
cctacactgg agagccaaca                                                  80

<210>   50
<211>   80
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>   50
tatgctgatg acttcaaggg acggtttgcc ttctctttgg aaacctctgc cagcactgcc      60
tatttgcaag atcaacacct                                                  80

<210>   51
<211>   70
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>   51
caaaaatgag gacacggcta catatttcgc tgcaagagcc tactatggta aatactttga      60
ctacgaattc                                                            70

<210>   52
<211>   49
<212>   DNA
<213>   Artificial Sequence

<220>
<221>   misc_feature
<223>   Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>   52
gaattcgtag tcaaagtatt taccatagta ggctcttgca gcaaatatg               49
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```
<210>  53
<211>  81
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>  53
tagcctgtgt ctcatttttt gaggttgttg atctgcaaat aggcagtgct ggcagaggtt      60
tccaaagaga aggcaaaccg t                                                 81

<210>  54
<211>  80
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>  54
cccttgaagt catcagcata tgttggctct ccagtgtagg tgtttatcca gcccatccac      60
tttaaaccct ttcctggagc                                                  80

<210>  55
<211>  81
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>  55
ctgcttcacc cagttcattc catagtttgt gaaggtatac ccagaagcct tagcggagat      60
cttgactgtc tctccaaggc t                                                 81

<210>  56
<211>  100
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>  56
tcttcagctc aggtccagac tgcaccaact ggatctgtgc ttgggcactt tcggcagctg      60
ccatcaggaa tagcaaggtc cacacccaag ccatgaattc                            100

<210>  57
<211>  63
<212>  DNA
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400>  57
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agtattgtga tgacccagac tcccaaattc ctgcttgtat cagcaggaga cagggttacc          60
ata.                                                                         63

<210> 58
<211> 64
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVHCOL1

<400> 58
acctgcaagg ccagtcagag tgtgagtaat gatgtagctt ggtaccaaca gaaaaccagg          60
gcag                                                                        64

<210> 59
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 59
tctcctaaac tgctgatata ctatgcatcc aatcgctaca ctggagtccc tgatcgcttc          60
actggcagt                                                                   69

<210> 60
<211> 64
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 60
ggatatggga cggatttcac tttcaccatc agcactgtgc aaggctgaag acctggcagt          60
ttat                                                                        64

<210> 61
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 61
ttctgycagc aggattatag ctctccgctc accttcggtg ctgggaccaa gctggacctg          60
aaagaattc                                                                   69

<210> 62
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature

<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 62
gaattctttc agctccagct tggtcccagc accgaacgtg agcggagagc tataatcctg        60
ctgacagaaa taaactgc                                                       78

<210> 63
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 63
caggtcttca gcctgcacag tgctgatggt gaaagtgaaa tccgtcccat atccactgcc        60
agt                                                                       63

<210> 64
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 64
gaagcgatca gggactccag tgtagcgatt ggatgcatag tatatcagca gtttaggaga        60
ctgccctgg                                                                 69

<210> 65
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 65
tttctgttgg taccaagcta catcattact cacactctga ctggccttgc tggttatggt        60
aac                                                                       63

<210> 66
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 66
cctgtctcct gctcatacaa gcaggaattt gggagtctgg gtcatcacaa tacttgcttg        60
ggc                                                                       63

<210> 67
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 67
ttcgctcagc aggattatag ctctccgctc acgttcggtg ctgggaccaa gctggagctg    60
aaagaatc                                                             68

<210> 68
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400> 68
gaattctttc agctccagct tggtcccagc accgaacgtg agcggagagc tataatcctg    60
ctgagcgaaa taaactgc                                                  78

<210> 69
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<223> Description for Artificial Sequence: Constructs for 2CAVLCOL1

<220>
<221> CDS
<222> (1)..(399)

<400> 69
atg gct tgg gtg tgg acc ttg cta ttc ctg atg gca gct gcc caa agt    48
Met Ala Trp Val Trp Thr Leu Leu Phe Leu Met Ala Ala Ala Gln Ser
1               5                   10                  15
gcc caa gca gac att gtg atg tca cag tct cca tcc tcc cta gct gtg    96
Ala Gln Ala Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val
            20                  25                  30


tca gtt gga gag aag gtt act atg agc tgc aag tcc agt cag agc ctt    144
Ser Val Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
        35                  40                  45
tta tat agt agc aat caa aag atc tac ttg gcc tgg tac cag cag aaa    192
Leu Tyr Ser Ser Asn Gln Lys Ile Tyr Leu Ala Trp Tyr Gln Gln Lys
    50                  55                  60
cca ggg cag tct cct aaa ctg ctg att tac tgg gca tcc act agg gaa    240
Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65                  70                  75                  80
tct ggg gtc cct gat cgc ttc aca ggc ggt gga tct ggg aca gat ttc    288
Ser Gly Val Pro Asp Arg Phe Thr Gly Gly Gly Ser Gly Thr Asp Phe
                85                  90                  95
act ctc acc atc agc agt gtg aag gct gaa gac ctg gca gtt tat tac    336
Thr Leu Thr Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr
            100                 105                 110
tgt cag caa tat tat aga tat cct cgg acg ttc ggt gga ggc acc aag    384
Cys Gln Gln Tyr Tyr Arg Tyr Pro Arg Thr Phe Gly Gly Gly Thr Lys
            115                 120                 125
ctg gaa atc aaa cgg                                                  399

Leu Glu Ile Lys Arg
    130

<210>  70
<211>  133
<212>  PRT
<213>  Artificial Sequence

<220>
<221>  misc_feature
<223>  Description for Artificial Sequence: Constructs for 2CAVLCOL1

<400>  70
Met Ala Trp Val Trp Thr Leu Leu Phe Leu Met Ala Ala Ala Gln Ser
1               5                   10                  15

Ala Gln Ala Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val
                20                  25                  30

Ser Val Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
            35                  40                  45

Leu Tyr Ser Ser Asn Gln Lys Ile Tyr Leu Ala Trp Tyr Gln Gln Lys
        50                  55                  60

Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65                  70                  75                  80

Ser Gly Val Pro Asp Arg Phe Thr Gly Gly Gly Ser Gly Thr Asp Phe
                85                  90                  95

Thr Leu Thr Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr
            100                 105                 110

Cys Gln Gln Tyr Tyr Arg Tyr Pro Arg Thr Phe Gly Gly Gly Thr Lys
        115                 120                 125

Leu Glu Ile Lys Arg
        130